INTERNAL CORRESPONDENCE

TECHNICAL CENTER

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To (Name) C. F. Schubert
Division
Location Sistersville

Date August 13, 1980
Originating Dept. Health/Environmental Engineering
Subject Buried Waste Sites I & II
Interpretation of Test Well Analyses

Copy to A. H. Cheely

Dear Clem:

Thank you for sending CompuChem's latest report. I have developed summary sheets of the GC/MS results obtained so far and attached copies to this letter. For clarity, I will separate this discussion into two parts.

Site I

Recommendations

1) CompuChem should reanalyze for volatile data.
2) Sample all four wells, analyze water for metals.
3) Analyze one soil sample each [for metals] on Wells 2,3, and 4.
4) Confirm absence of potable water supply wells in the immediate vicinity.
5) Begin at least a monthly water level record for all four holes.

Explanation

I agree that the data which was lost by CompuChem is probably below detection limits [BDL] but we can't prove it without repeating the analyses. I also agree on the need for further testing, but since the only compounds found in significant concentrations were metals, a metals analysis should be sufficient. A complete metals scan, if performed at Tarrytown, costs about $100. The price list I have for CompuChem states a maximum price of $80. The metals analyses on all four holes will enable us to see if metals have migrated as far as Well 1. For the two metals which have drinking water standards (copper and zinc) Well 4 meets the criteria, even though the concentration of metals in Well 4 are significantly above the background well.

Since the area contains much clay, there may be significant sorption of metals, which could cause leaching to continue for an extended period of time. The solids metals analyses would involve digesting the soil, probably in a perchloric acid/nitric acid mixture. The digestion would be followed by the routine metals analyses. The cost depends on the laboratory. It runs $100 to $125 per soil sample.

After review, if we conclude that there are no water supply wells in the immediate vicinity and the soils metal analyses are acceptable, the Site 1 closeout plan presented in my letter dated April 14, 1980 should be implemented.

Site II

Recommendations

1) CompuChem should reanalyze for the volatile data that was lost.

2) All locations should be resampled and analyzed for metals and phenols.

3) Determine the need for further work at this site.

We need a drawing of the location of the monitor wells relative to the location of waste materials. After review of the data for potential plumes relative to the monitor wells, we would like to discuss the results of the review. At that time, we would discuss additional studies and timing.

Explanation

The data to date indicate to me that there is no imminent health hazard and no need for immediate action. The reasons for this are as follows:

1) I know of no public or private drinking water supply wells in the immediate vicinity.

2) The UCC wells which could possibly be impacted at some future date are not used as drinking water wells.

I agree with your interpretation of the high copper concentration in Sugar Camp Run. When the spent Cu-Si waste pile is properly disposed of, the 0.54 mg/l should drop considerably.

The new information on Site II does not change my preliminary conclusions as stated in my letter to you dated June 12, 1980. The concentrations seen here do not justify removal of the material at this time.

Sincerely,

Deborah T Marsh

D. T. Marsh

Attachments
DTM/bms

SUMMARY SHEET - SITE I

| WELL 2* (1) COMPOUND | CONCENTRATION | EPAs Recommended DETECTION LIMIT |
|---|---|---|
| Lead | 0.05 mg/l | 0.5 mg/l |
| Mercury | 0.0003 mg/l | 0.0002 mg/l |
| Phenols | 27 ug/l | 10 ug/l |
| **WELL 4* (1)** | | |
| Arsenic | 0.66 mg/l | 0.5 mg/l |
| Beryllium | 0.05 mg/l | 0.025 mg/l |
| Chromium | 0.57 mg/l | 0.10 mg/l |
| Copper | 0.92 mg/l | 0.10 mg/l |
| Nickel | 0.80 mg/l | 0.15 mg/l |
| Zinc | 2.05 mg/l | 0.02 mg/l |

(1) loss of volatile data occurred

* results just received 7/21/80 by DTM

DTM/bms
8/7/80

SUMMARY SHEET - SITE II

WELL 1

| COMPOUND | CONCENTRATION | | EPAs Recommended DETECTION LIMIT | |
|---|---|---|---|---|
| Methylene Chloride | 43.5 | ug/l | 10 | ug/l |
| Zinc | 0.04 | mg/l | 0.02 | mg/l |
| Phenols | 13 | ug/l | 10 | ug/l |

WELL 2

| | | | | |
|---|---|---|---|---|
| Methylene chloride | 23 | ug/l | 10 | ug/l |
| Cadmium | 0.02 | mg/l | 0.025 | mg/l |
| Silver | 0.009 | mg/l | 0.06 | mg/l |
| Zinc | 0.02 | mg/l | 0.02 | mg/l |

WELL 2A

| | | | | |
|---|---|---|---|---|
| Methylene Chloride | 40.1 | ug/l | 10 | ug/l |
| Bis (2-ethylhexyl) phthalate | 39.0 | ug/l | 10 | ug/l |
| Arsenic | 0.10 | mg/l | 0.05 | mg/l |
| Copper | 0.26 | mg/l | 0.1 | mg/l |
| Nickel | 0.28 | mg/l | 0.15 | mg/l |
| Zinc | 0.48 | mg/l | 0.02 | mg/l |
| Phenols | 28 | ug/l | 10 | ug/l |

WELL 4

| | | | | |
|---|---|---|---|---|
| Methylene Chloride | 36 | ug/l | 10 | ug/l |
| Cadmium | 0.02 | mg/l | 0.025 | mg/l |
| Mercury | 0.0002 | mg/l | 0.0002 | mg/l |
| Phenols | 13 | ug/l | 10 | ug/l |

WELL 5

| | | | | |
|---|---|---|---|---|
| Bis (2-ethylhexyl)phthalate | 13 | ug/l | 10 | ug/l |
| Zinc | 0.02 | mg/l | 0.02 | mg/l |
| Phenols | 18 | ug/l | 10 | ug/l |

SUGAR CAMP RUN 24 Hr. COMPOSITE*

| | | | | |
|---|---|---|---|---|
| Methylene Chloride | 33 | ug/l | 10 | ug/l |
| Bis (2-ethylhexyl) phthalate | 15 | ug/l | 10 | ug/l |
| Chromium | 0.1 | mg/l | 0.1 | mg/l |
| Copper | 0.54 | mg/l | 0.1 | mg/l |

Well 2A* check for pesticides/PCB's
came out below detection limits

(1) loss of volatile data occurred
* results just received 7/21/80 by DTM

DTM/bms
8/7/80